

Memorandum

*Flex your power!
Be energy efficient!*

To: CHAIR and COMMISSIONERS

CTC Meeting: July 19-20, 2006

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Informational Item

From: WILL KEMPTON, Director
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Director

Subject: **DIRECTOR'S REPORT**

BROADBAND INITIATIVE- CONCEPTUAL DISCUSSION:

The Business, Transportation and Housing Agency (Agency) and the Department of Transportation (Department) are considering a recommendation to the California Transportation Commission (Commission) that the Commission adopt a policy of integrating the facilitation of broadband deployment into all future transportation projects. The Department intends to develop specific recommendations to accomplish the policy objective and report back to the Commission in the near future.

Integrating broadband capabilities in future projects is part of the strategy of using technology to reduce congestion that the Commission has approved as part of GoCalifornia Strategic Growth Plan Pyramid [ATTACHMENT 1]. This will increase mobility, thereby accelerating the reduction of traffic congestion throughout the state. It will also encourage economic development in rural communities. The adoption of this policy objective is consistent with policy recommendations made by the Agency to the Office of the Governor regarding the deployment of ubiquitous broadband.

ISSUE:

California's economic comparative advantage and competitive edge are threatened by decreasing mobility. Congestion is increasing statewide due to current land use patterns and planned levels of investment. Congestion is eroding our quality of life and impacting the environment.

The use of advanced telecommunications is an increasingly vital tool in increasing mobility and reducing congestion; as well as improving economic development, education and healthcare. Accelerating the deployment of a next generation broadband infrastructure throughout California is among the highest priorities for Governor Schwarzenegger and the Commission – as seen in

his State of the State message and in the Commission approved GoCalifornia Strategic Growth Plan. Investments in broadband will yield high returns for all Californians, improve and strengthen the economy, and increase California's comparative advantage and competitive edge.

Next generation broadband — the capacity to receive and transmit reliable digital content at very high speeds with an uninterrupted, “always on” Internet connection — represents a fundamental requirement for success in the new economy, a critical platform for the creation of new services, industries and jobs. The ubiquitous deployment of broadband telecommunication is critical to California's leadership in technology and will enable us to make continual improvements in the quality of life in areas as diverse as mobility, economic development in rural communities, healthcare, the workplace and education. To remain competitive, California must adopt a coordinated strategy that promotes competition, innovation and public/private partnerships at all levels of government to establish the state as a world leader in advanced communications.

For these reasons, it is vital to have in place both the technological infrastructure and the statewide public-private partnerships required to make advanced telecommunication services available to, and useful for, all Californians, including those in rural or underserved areas. The ubiquitous deployment of broadband telecommunications, an essential infrastructure for the state's knowledge-based economy, will allow all regions of and communities in California to contribute to maintaining our comparative advantages in the global marketplace.

Over the past several years, the state has conducted several activities to promote broadband deployment. These activities have been programmatic¹ and policy oriented²; and most recently an admixture of the two³. While much has been accomplished through these efforts, the benefits of technology are still not available in all parts of the State of California. While our state has taken some steps to deploy broadband and enjoys some natural advantages, California, unlike other states, does not have a comprehensive strategy to take advantage of the benefits of broadband technologies. At this time, California needs to harness the power of market innovation and public/private partnerships to more rapidly deploy broadband networks.

As a result of the efforts by the California Public Utilities Commission (CPUC), the Statewide Rural Economic Vitality Conversation, the GoCalifornia Strategic Growth Plan and discussions between Agency and industry associations, stakeholders from the public and private sector are working together to qualitatively increase the utilization of existing telecommunications infrastructure. Several avenues can be used to increase access to affordable advanced telecommunications. Their plan rests on the assumption that the most effective way of leveraging public investment and attracting greater private sector investment is through the

¹ In 1998, as a result of a legislatively funded effort called the Central Valley Initiative, the Great Valley Center began a comprehensive series of programs and activities designed to increase the use of technology in the Valley, from Redding to Bakersfield, and in FY 2000 and FY 2001 the California Technology, Trade and Commerce Agency conducted the Rural E-Commerce Program.

² Broadband Deployment in California, California Public Utilities Commission, May 5, 2005.

³ See the attachment to the addendum of Significant Issue Report 2005IM0325 referring to the establishment of the California Emerging Technology Fund by the California Public Utilities Commission.

immediate and simultaneous embedding of broadband nodes (on-ramps) throughout rural California connected to public networks. These nodes need to have sufficient bandwidth for economic development, education and healthcare.

The Agency has drafted a policy [ATTACHMENT 2], currently under consideration by the Governor's Office, titled "Ubiquitous Broadband Deployment in California". The draft policy is built on the CPUC plan for the deployment of broadband, is further informed by the dialogues and conversations mentioned above, and has been sent from the Agency to the Office of the Governor. The implementation of the policy would accelerate the deployment and increase the use of broadband telecommunication throughout California, in a manner which will generate jobs, improve the business climate, invite and encourage competition on a technology neutral basis, increase access to high quality education and healthcare, improve education and public health, enhance public safety, increase access to government services and improve California's quality of life.

To realize these objectives, the State would pursue a technology-neutral strategy that will:

- Reduce barriers to the deployment and use of new broadband technologies by facilitating access to publicly-owned rights of way.
- Accelerate the deployment of new wireline and wireless networks by promoting shared builds among broadband providers and accommodating the deployment of conduit during the construction or repair of roads, highways, and transit projects.
- Stimulate private investment in broadband telecommunication infrastructure by partnering with communities that are adopting and implementing strategies that promote local broadband use and availability to business and the home.
- Leverage state assets in a competitively neutral manner that support broadband development; for example, using the state's purchasing power to drive demand for new broadband investment in underserved communities.
- Assure the success of this policy by establishing and institutionalizing advisory working groups, composed of representatives of relevant state agencies, industry and other statewide, regional and local stakeholders that will assist in its implementation.

The proposed strategy complements the CPUC study on Broadband Deployment in California. Whereas that study has put forward recommendations to eliminate barriers to the promulgation of broadband, the mission of the policy suggested by the Agency to the Governor's Office is to accelerate the ubiquitous availability and use of advanced communications services. Together, these strategies would advance California's long-standing view that the state will benefit from increased deployment, access and usage of broadband services.

Enactment of the draft policy by the Governor would enable both the ubiquitous availability of broadband telecommunications throughout California by the year 2010, and provide the guidance and leadership necessary to sustain and constantly improve the quality and speed of the broadband network while increasing the adoption and use of advanced telecommunication services and applications throughout California.

BACKGROUND:

Broadband is critical to California's economy. Virtually all new investment in California's high technology industry is predicated on the ubiquitous availability of broadband infrastructure. The innovative use of this infrastructure has created a platform for the development of new high-growth companies and enabled new applications such as Voice-over-Internet Protocol. More fundamentally, broadband access is critical to the growth of small and medium-sized businesses, by enabling them to reach new customers and markets, and purchase supplies more quickly and cheaply.

California companies have led the world in the creation of broadband technologies and the development of new applications. These broadband telecommunication technologies are quickly becoming a necessary part of life in modern society. Its use is growing exponentially. Throughout the world, governments are making commitments to the ubiquitous access to high-speed internet telecommunications. High-speed telecommunications services are rapidly becoming a basic requirement for access to world-class government services, education, job related activities, healthcare, public safety warning systems, financial services and global communications. Regions, states and countries that lag in the deployment of high-speed telecommunication networks will be at a distinct disadvantage in developing the applications and services that will drive the new economy.

Unfortunately, deployment of broadband technologies and the use of advanced telecommunication services in the United States – including California – lags behind that in many other countries. The most recent ranking by the International Telecommunications Union puts the U.S. in 16th place among countries in terms of the percentage of population subscribing to broadband⁴. Moreover, the average user in world leaders such as Japan and Korea can access much higher speeds (up to 100 megabits per second) than generally available in the United States. These higher speeds enable functions such as HDTV video over the Internet. A lack of a comprehensive initiative in the United States has resulted in significant variability in the speed of broadband connections in similar geographic areas, making it difficult for broadband applications providers to develop services for those areas. Consequently in the United States, where speeds typically range from less than five-hundred kilobits per second to five megabits per second, users do not have access to many of the most exciting state-of-the-art applications such as high-resolution video-conferencing.

In December 2003, the Agency prepared the "Framework for Economic Prosperity" for the Economic Vitality Conversations to accelerate the deployment of broadband technologies. The Framework has received the support by civic leaders throughout California.

In April 2005, as a result of the Rural Economic Vitality Conversation held at the invitation of the Agency, an ad hoc group of rural economic development organizations began to develop a proposal to accelerate deployment of advanced telecommunications and broadband technologies

⁴ <http://www.itu.int/osg/spu/newslog/ITUs+New+Broadband+Statistics+For+1+January+2005.aspx>.

in rural California. The ad hoc group was convened by the California Telemedicine and e-health Center and the participants decided on their own to propose a strategy of linking health centers into an “e-health network” that also could serve to support economic development and education purposes in rural California. Their report was finalized and was sent to the Office of the Governor as an attachment of a Significant Issue Report (SIR) titled Deploying Ubiquitous Broadband in Rural California to Enhance Economic Development, Education and Health Care (2005IM0325). Further, the matter of accelerating the deployment of advanced telecommunications and broadband technologies is a subject of interest in the San Joaquin Valley and has been adopted as part of the Work Plan for the California Partnership for the San Joaquin Valley. Moreover, accelerating the deployment of broadband technologies has been an articulated strategy in the “Framework for Economic Prosperity” prepared by the Agency for the initial Economic Vitality Conversations and has been supported by civic leaders in all the Conversations throughout California. In addition, the CPUC has focused on broadband technology during the last year and is considering various approaches to enabling and accelerating deployment. The CPUC has also established the California Emerging CETF. The addendum to the SIR (2005IM0325) discusses the possible effects that the CETF by the CPUC could have on the formulation and implementation of overall policy for the deployment of advanced telecommunications and broadband technology.

In May 2005, the CPUC released its study on Broadband Deployment in California, which contained detailed policy recommendations.

On November 18, 2005, as part of their decision to approve the mergers of Verizon with MCI and SBC with AT&T, the CPUC established the CETF as a non-profit organization tasked with ensuring that all California residents, particularly those in underserved communities, have ubiquitous access to broadband and advanced services in California through the use of emerging technologies by 2010. The CETF will fund the deployment of broadband facilities and advanced services to underserved communities. “Underserved communities” is defined, in this case, as communities with access to no more than two broadband service providers, including satellite, or broadband adoption rates below a statewide average; communities such as low-income households, ethnic minority communities, disabled citizens, seniors, small businesses and rural or geographic areas that are costly to serve. In addition to the goal of providing ubiquitous access to broadband and advanced services in California, the CETF would also have adoption and usage as its goals.

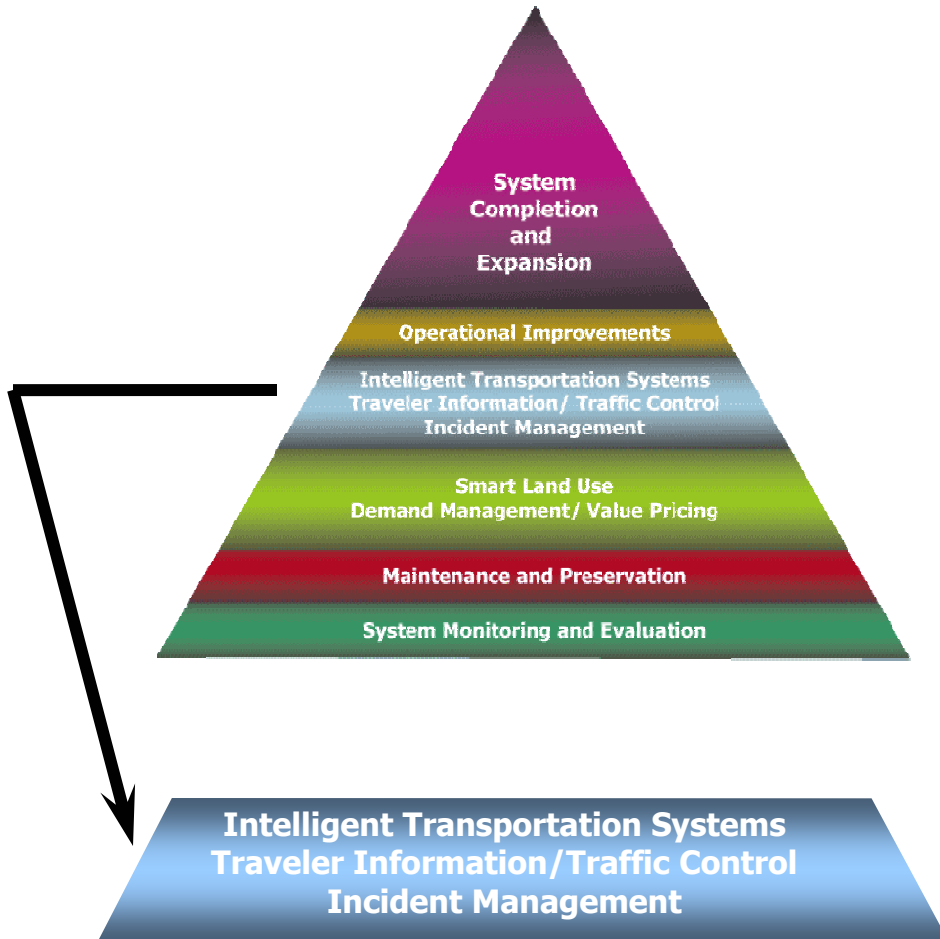
The Agency is in discussion with, and assessing proposals from, industry associations, such as TechNet, regarding the broader deployment of advanced telecommunications and information technologies throughout California. These discussions are providing vital input for the successful deployment, and accelerated adoption, of advanced telecommunications and broadband technology that will be based on an industry-led, industry-driven, technology-neutral strategy which builds upon the broadband deployment plan of the CPUC. Commission endorsement of the policy objective at a later date will set a framework for the development of specific policies for advancing this technology and assist the administration in the deployment of ubiquitous broadband throughout the state.

ATTACHMENTS

1. GoCalifornia Pyramid – Intelligent Transportation Systems, Traveler Information/Traffic Control, and Incident Management
2. Draft Policy Statement – Ubiquitous Broadband Deployment in California

GoCalifornia

Strategies to Maximize Mobility



Intelligent Transportation System (ITS) Includes

- Traveler Information
- Traffic Control
- Incident Management (Includes Freeway Service Patrol)
- System Monitoring and Evaluation (At Base of Triangle)
- Traveler Information – Benefit/Cost Ratio of 15:1
- Traffic Control – Benefit/Cost Ratio of 10:1
- Incident Management –

Action Plan

<u>Strategies</u>	<u>System Performance Outcome</u>
Fully Fund and Implement ITS in SHOPP Plan	Reduced Delay by 20%
Improve Central and Field Element Operations and Maintenance	Preserved Health of System Operation and Reduced Delay
Expand Freeway Service Patrol	Reduced Delay
Total Package Will Result in:	Reduced Future Delay by 200,000 Hours/Day

DRAFT POLICY STATEMENT

March 27, 2006

UBIQUITOUS BROADBAND DEPLOYMENT IN CALIFORNIA

Next generation broadband — the capacity to receive and transmit digital content at very high speeds with an uninterrupted, “always on” Internet connection — represents a fundamental requirement for success in the new economy, a critical platform for the creation of new services, industries and job creation. The ubiquitous deployment of broadband telecommunication is critical to California’s leadership in technology and will enable us to make continual improvements in the quality of life in areas as diverse as healthcare, the workplace and education. To remain competitive, California must adopt a coordinated strategy that promotes competition, innovation and public/private partnerships at all levels of government to establish the state as a world leader in advanced communications.

The use of advanced telecommunications is an increasingly vital tool in economic development, education and healthcare. The State’s knowledge-based economy and quality of life depend upon continually improving the communications infrastructure, so that voice, data and video can all be seamlessly transmitted by government, business, and citizens. Accelerating the deployment of a next generation broadband infrastructure throughout California is among the highest priorities for Governor Schwarzenegger.

It is vital to have in place both the technological infrastructure and the statewide public-private partnerships required to make advanced telecommunication services available to and useful for all Californians, including those in rural or underserved areas. The ubiquitous deployment of broadband telecommunications, an essential infrastructure for the state’s knowledge-based economy, will allow all regions of and communities in California to contribute to maintaining our comparative advantages in the global marketplace.

Improving the advanced telecommunication and broadband infrastructure is also pivotal, not just for improving access to high quality education and health care for everyone in California, but also to improve the educational experience and the quality of healthcare itself. It is vital that local, regional and state efforts be coordinated and integrated to ensure that obstacles to the deployment of ubiquitous broadband be surmounted.

It is the policy of this Administration to accelerate the deployment and increase the use of broadband telecommunication throughout California, in a manner which will:

- Generate jobs.
- Improve the business climate.
- Invite and encourage competition on a technology neutral basis.
- Increase access to high quality education and health care.
- Improve education and public health.
- Enhance public safety.
- Increase access to government services.
- Improve California's quality of life.

To realize these objectives, the State will pursue a technology neutral strategy which will:

- Reduce barriers to the deployment and use of new broadband technologies by facilitating access to publicly-owned rights of way.
- Accelerate the deployment of new wireline and wireless networks by promoting shared builds among broadband providers and deploying conduit during the construction or repair of roads, highways, and transit projects.
- Improve the delivery of State services by increasing the use and effectiveness of e-government.
- Stimulate private investment in broadband telecommunication infrastructure by partnering with communities that are adopting and implementing strategies that promote local broadband use and availability to business and the home.
- Leverage state assets, in a competitively neutral manner, that support broadband development, for example by using the state's purchasing power to drive demand for new broadband investment in underserved communities.
- Assure the success of this policy by establishing and institutionalizing advisory working groups, composed of representatives of relevant state agencies, industry and other statewide, regional and local stakeholders that will assist in its implementation.